

## Amendments to the Claims

Please amend the claims as follows.

1. (Currently Amended) A sparger system for use in a reactor, the sparger system comprising a gas outlet for passing gas into the reactor, and a gas distribution system to supply the gas to the outlet, wherein the gas distribution system feeding the sparger with gas to be ejected from the gas outlet is disposed above the sparger outlet in the system, wherein ~~the distance between~~ the sparger gas outlets is are situated at least 15 cm below the distribution system, and wherein the distance between the gas outlet and the reactor floor is less than 20 cm and wherein the gas distribution system has a gas supply connection via the reactor wall 0.3 to 8 m above the sparger outlets.
2. (Previously Presented) The sparger system of claim 1, wherein the gas outlet is adapted to eject gas across the floor of the reactor.
3. (Previously Presented) The sparger system of claim 1, wherein the sparger outlet is located at the end of the sparger, which is in turn located at the end of a distribution conduit feeding the gas to the sparger.
4. (Previously Presented) The sparger system of claim 1, wherein the distance between the gas outlet and the reactor floor is less than 10 cm.
5. (Previously Presented) The sparger system of claim 1, wherein the gas outlet incorporates a flow controlling means to regulate the speed of the gas jet through the outlet.
6. (Previously Presented) The sparger system of claim 5, wherein the flow controlling means is a Venturi-type orifice having a shroud pipe to limit the injection velocity of the gas.

7. (Previously Presented) The sparger system of claim 1, wherein each sparger has a plurality of outlets directed outwardly from a sparger head and arranged equidistantly from one another around the periphery of the sparger head.

Claims 8-11 (Canceled).

12. (Previously Presented) The sparger system of claim 1, wherein the sparger system is used in a reactor with a cooling system and the spargers and cooling system are arranged in corresponding patterns.

Claim 13 (Canceled).